

=> d his

(FILE 'HOME' ENTERED AT 06:23:37 ON 14 JUN 2001)
FILE 'REGISTRY' ENTERED AT 06:23:46 ON 14 JUN 2001
E RUTHENIUM TETRAOXIDE/CN
L1 1 S E3
SEL NAME L1
FILE 'CA' ENTERED AT 06:25:51 ON 14 JUN 2001
L2 1486 S L1 OR E1-6 OR RUO4
E BLALOCK G/AU
L3 29 S E3-6
L4 0 S L2 AND L3
L5 0 S L3 AND (RUTHEN? OR RU)
FILE 'REGISTRY' ENTERED AT 06:30:48 ON 14 JUN 2001
E POLYPROPYLENE/CN
L6 1 S E3
FILE 'CA' ENTERED AT 06:36:04 ON 14 JUN 2001
L7 213790 S (CONDUCTIVITY OR RESISTIVITY OR RESISTANCE OR
CONDUCTANCE) (5A) (CHANGE OR INCREASE OR DETECT? OR DETERMIN? OR MEASUR?
OR MONITOR? OR ANALY? OR ASSAY? OR TEST? OR QUANTIF? OR ESTIMAT? OR
EVALUAT? OR SENSE# OR SENSING OR PROBE# OR PROBING)
L8 17020 S (L6 OR (PROPYLENE OR PROPENE) (2A) (POLYMER OR HOMOPOLYMER OR POLY) OR
POLYPROPYLENE OR POLYPROPENE) (4A) (FILM OR SUBSTRATE OR SUPPORT)
L9 139 S L8 (10A) ELECTRODE
L10 56425 S (GLASS OR SO2 OR SILICON DIOXIDE OR QUARTZ) (4A) (FILM OR SUBSTRATE OR
SUPPORT)
L11 2219 S L10 (10A) ELECTRODE
L12 98 S L2 (5A) (DETECT? OR DETERMIN? OR MEASUR? OR MONITOR? OR ANALY? OR
ASSAY? OR TEST? OR QUANTIF? OR ESTIMAT? OR EVALUAT? OR SENSE# OR
SENSING OR PROBE# OR PROBING)
L13 0 S L9, L11 AND L12
L14 0 S L12 AND (CONDUCTIVITY OR RESISTIVITY OR RESISTANCE OR CONDUCTANCE)
L15 178 S L9, L11 AND (DETECTOR OR SENSOR OR (SENSING OR DETECTING OR
DETECTION) (2A) (DEVICE OR ELEMENT OR APPARATUS))
L16 28 S L15 AND (CONDUCTIVITY OR RESISTIVITY OR RESISTANCE OR CONDUCTANCE)
L17 5376 S ((METAL? OR RUTHENIUM OR IRIDIUM OR RHODIUM) (4A) (VAPOR? OR GAS? OR
VOLATILE)) (5A) (DETECT? OR DETERMIN? OR MEASUR? OR MONITOR? OR ANALY?
OR ASSAY? OR TEST? OR QUANTIF? OR ESTIMAT? OR EVALUAT? OR SENSE# OR
SENSING OR PROBE# OR PROBING)
L18 326 S L17 AND L7
L19 4 S L8, L10 AND L18
L20 62 S L9, L11 AND L7
L21 22495 S (NONCONDUCT? OR INSULATING OR NON CONDUCT?) (4A) (FILM OR SUBSTRATE OR
SUPPORT)
L22 3758 S L21 (10A) ELECTRODE
L23 70 S L7 AND L22
L24 41 S L21 AND L17
L25 288 S L12, L16, L19-20, L23-24
L26 272 S L25 NOT PY>1999

=> d 126 bib, ab 1-272

L26 ANSWER 12 OF 272 CA COPYRIGHT 2001 ACS
AN 130:261240 CA
TI Sensor for detecting organic solvent gases and basic gases
IN Kita, Junichi; Okubo, Kunihiro; Yoshii, Mitsuyoshi; Aoyama, Yoshihiro;
Kuyama, Hiroki; Yoshino, Katsumi
PA Shimadzu Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.
PI JP 11094784 A2 19990409 JP 1997-275313 19970922
AB The title sensor comprises a gas-sensing film which is made from a mixt. contg. elec. conductive microparticles (e.g., carbon black) and a low-cond. conductive polymer (e.g., polythiophenes) doped by a small amt. of a dopant. The sensing film is formed between the pair of electrodes on an insulating substrate, in which changes in the resistivity of the sensing film are monitored as a gas to be detected deposits on the sensing film.

L26 ANSWER 31 OF 272 CA COPYRIGHT 2001 ACS

AN 127:155890 CA

TI The influence of the electrodeposition parameters on the morphology of organo-transition metal complexes for thin film gas sensor applications

AU Bates, J. R.; Kathirgamanathan, P.; Miles, R. W.

CS Department of Electrical and Electronic Engineering and Physics, University of Northumbria, Newcastle upon Tyne, NE1 8ST, UK

SO Thin Solid Films (1997), 299(1-2), 18-24

AB The electrodeposition of tetrabutylammonium bis(1,3-dithiol-2-thione-4,5-dithiolate) nickelate (Bu₄NNi(dmit)₂) onto platinum, gold interdigitated, and fluoride-doped SnO₂ electrodes. The effects of adding pyrrole, thiophene, 3-methylthiophene, and furan to the deposition soln. on the film morphol. were investigated. The bulk cond. of the deposited films was 4×10^{-2} S/cm irresp. of the heterocycle added. Cyclic voltammetry was carried out using the three electrodes: the gold and platinum electrodes showed similar electrochem. behavior, with the peaks assigned to the redox properties of the metal-dmit; the SnO₂ electrode did not yield any distinct peaks. This was attributed to the observation that the rate of electron transfer to the SnO₂ electrode was the rate-limiting step rather than the rate of diffusion to the electrode surface as in the case of the platinum and gold electrodes. The films deposited onto the interdigitated gold electrodes were exposed to SO₂, and changes in the film resistance were monitored. Films deposited in CH₂Cl₂ had a much lower surface area than those deposited from nitrobenzene, and the magnitude of the change in resistance on exposure to SO₂ was a factor of four lower than for the films deposited in nitrobenzene. Studies were also carried out on copper and cobalt dmit analogs; the copper-dmit behaved in a similar manner to the nickel-dmit, although the films were of very low cond., whereas the cobalt-dmit showed no reversible redox behavior.

L26 ANSWER 60 OF 272 CA COPYRIGHT 2001 ACS

AN 121:174190 CA

TI Thin-film microsystem applicable in (bio)chemical sensors

AU Tvarozek, V.; Ti Tien, H.; Novotny, I.; Hianik, T.; Dlugopolsky, J.;

Ziegler, W.; Leitmannova-Ottova, A.; Jakabovic, J.; Rehacek, V.; et al.

CS Department of Microelectronics, Slovak Technical University, Ilkovicova 3, Bratislava, 812,19, Czech.

SO Sens. Actuators, B (1994), 19(1-3), 597-602 CODEN: SABCEB; ISSN: 0925-4005

AB A strip thin-film microsystem based on the silicon diaphragm or glass substrate, thin-film heater and planar interdigital array of electrodes has been developed. The used thin-film and silicon micromachining technologies are compatible with microelectronics IC technologies which allow a further development towards smart sensors. Description of some possible applications of thin-film microsystem is presented: (i) gas-resistance sensor; (ii) electrochem. voltammetric sensor, and (iii) biosensor based on the supported bilayer lipid membranes. The last one is presented in more details because the lipid bilayers seem to be the attractive candidates for biosensors applications.

L26 ANSWER 65 OF 272 CA COPYRIGHT 2001 ACS

AN 120:249133 CA

TI A sensor for monitoring water and acid in the presence of water in nonaqueous media

IN Yamagishi, Frederick G.; Van Ast, Camille I.; Miller, Leroy J.

PA Hughes Aircraft Co., USA

SO Eur. Pat. Appl., 15 pp.

PI EP 584557 A1 19940302 EP 1993-111976 19930728

US 5331287 A 19940719 US 1992-922899 19920731

PRAI US 1992-922899 19920731

AB A system for monitoring the quality of nonaq. fluids (e.g., engine oil) in equipment or vehicles includes a sensor comprising an insulating substrate; electrodes formed on the substrate in an interdigitated pattern; and a conductive polymer (e.g., polyaniline) deposited over the interdigitated electrodes which bridges between adjacent digits of the electrodes. The conductive polymer reversibly increases cond. in measurable amts. with increasing acid and/or water content due to protonation by the acid or hydration by the water.

L26 ANSWER 94 OF 272 CA COPYRIGHT 2001 ACS

AN 117:122195 CA

TI Effect of iodine on electrical conduction in cellulose acetate-butyrate polymer films

AU Reddy, N. Venugopal; Rao, V. V. R. Narasimha

CS Coll. Eng., Sri Venkateswara Univ., Tirupati, 517 502, India

SO J. Mater. Sci. Lett. (1992), 11(15), 1036-8 CODEN: JMSLD5; ISSN: 0261-8028

AB Pure and I-doped cellulose acetate-butyrate films of thickness 5 μ m were grown by isothermal immersion of glass substrates coated with metal electrodes. The cond. increase with temp. consists of two distinct regions of conduction. The cond. increases with with increasing concn. of I up to 0.5 wt.%. Above this concn., however, the cond. decreases continuously with increasing I concn. The cond. in the doped sample is always more than that in the pure sample, even at higher concn. The increase in the activation energy at higher concn. can be explained as being due to the formation of mol. aggregates of the I. The charge carriers become more localized.

L26 ANSWER 105 OF 272 CA COPYRIGHT 2001 ACS

AN 115:173734 CA

TI Ruthenium sensor with an oscillator

IN Arai, Yuko; Honda, Taku

PA Hitachi, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

PI JP 03048748 A2 19910301 JP 1989-183790 19890718

AB The Ru sensor, esp. useful in nuclear fuel reprocessing plants, comprises an oscillator equipped with electrodes and org. films on an electrode. The shift in resonance frequency of the oscillator is detd., as RuO₄ is reduced to RuO₂ and deposited, causing a wt. increase on the org. film.

L26 ANSWER 111 OF 272 CA COPYRIGHT 2001 ACS

AN 114:177561 CA

TI Quartz-oscillator sensor for determination of ruthenium oxide (RuO₄)

IN Arai, Yuko; Honda, Taku

PA Hitachi, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

PI JP 02293644 A2 19901204 JP 1989-113737 19890508

AB The title sensor, having high sensitivity and an in situ capability, comprises an org. film (e.g., polyethylene and rubber) on an electrode of a

quartz oscillator, where redn. of RuO₄ and subsequent RuO₂ deposition (i.e., causing a wt. increase) on the org. film surface is measured as a change in the resonance frequency of the oscillator to det. RuO₄.

L26 ANSWER 112 OF 272 CA COPYRIGHT 2001 ACS

AN 114:177546 CA

TI Sensor with hollow cylindrical metal-ring electrodes

IN Schmidt, Karl Heinz

PA Siemens A.-G., Fed. Rep. Ger.

SO Eur. Pat. Appl., 3 pp.

PI EP 386660 A1 19900912 EP 1990-104132 19900302

PRAI DE 1989-8902974 19890310

AB In the face of a cylindrical support body made of insulating material, 4 concentric metal rings are attached as electrodes for a cond. sensor, which are sealed flat with the face. The sensor allows insertion into piping or a container flush with the interior surface of the wall. The electrodes are formed as hollow cylindrical metal rings of a low overall height which are positioned coaxially to the centerline of the support body, allowing the face of the sensor to be concave and to accommodate the curve of the wall surface of the container.

L26 ANSWER 130 OF 272 CA COPYRIGHT 2001 ACS

AN 111:222878 CA

TI Gas-sensitive silver ion conduction in semiconducting zinc oxide thin films

AU Takayama, H.; Fujitsu, S.; Vanagida, H.

CS Fac. Eng., Univ. Tokyo, Tokyo, 113, Japan

SO Solid State Ionics (1989), 35(3-4), 411-15

AB A new type of reducing gas sensing system is developed based on changes in ionic cond. Though it is well known that the resistivity of n-type semiconductors such as ZnO decreases on the introduction of reducing gases, that of thin films sputtered on silica glasses in the present study (which had Ag electrodes) increased with the introduction of reducing gases. This abnormal property is due to the change in the ionic resistance of Ag⁺ incorporated from the electrode.

L26 ANSWER 137 OF 272 CA COPYRIGHT 2001 ACS

AN 109:196376 CA

TI Method and apparatus for simultaneous detection of target gases in ambient air

IN Grace, Richard; Portnoff, Marc A.; Guzman, Alberto M.; Runco, Paul D.; Yannopoulos, Lympenios N.

PA American Intell-Sensors Corp., USA

SO Eur. Pat. Appl., 13 pp.

PI EP 280540 A2 19880831 EP 1988-301598 19880224

US 4911892 A 19900327 US 1987-17838 19870224

PRAI US 1987-17838 19870224

AB Thick film gas sensors suitable for detection of CO and CH₄ in air comprise an elec. insulating substrate, a pair of electrodes positioned on the substrate, a gas sensing film positioned on the substrate in contact with the electrodes, means to secure the film to the substrate, means for heating the film, and filter means for decreasing other gas interference by combustion of such gases. The gas sensing film includes a 1st metal oxide gas sensing layer and a 2nd conductive catalyst layer (Sn oxide) for combustion of interfering gases. The catalysts can be Pt, Pd, or Au.

L26 ANSWER 163 OF 272 CA COPYRIGHT 2001 ACS

AN 103:200278 CA

TI Semiconductor oxide gas combustibles sensor

IN Yannopoulos, Lymperios Nicholas
 PA Westinghouse Electric Corp., USA
 SO Brit. UK Pat. Appl., 14 pp.
 PI GB 2151796 A1 19850724 GB 1984-32173 19841220
 US 4587104 A 19860506 US 1983-564051 19831221
 PRAI US 1983-564051 19831221
 AB A semiconductor oxide thick film sensor for monitoring gas compns. esp. CO and H concn., based on changes in elec. resistivity compromise a nonconducting substrate, a pair of sepd. electrodes on the substrate, a thick film Bi₂O₃.3MoO₃ element in intimate contact with 1 surface of the substrate and in intimate contact with the electrodes, a film heater with predetd. heating range in intimate contact with the other side of the substrate from the thick film element, and a circuit for monitoring the change in resistivity of the thick film element in response to fuel and O constituent reactions at the surface of the thick film element as an indication of the fuel constituent of the gas compn. contacting the thick film element. Thus, Bi₂O₃.3MoO₃ powder was mixed with β -terpineol to form a paste and applied to a non-conductive substrate to form a semiconductor oxide thick film, predried to $\leq 100^\circ$, then slowly heated to less than the eutectic, preferably $\sim 550^\circ$, and sintered 2 h. The thick film bridged 2 sep. electrodes and a film heater was secured to the substrates on the opposite side. In tests with O-N mixts. contg. CO or H and sometimes water vapor, typical of CH₄-burning boiler atms., the Bi₂O₃.3MoO₃ had rapid response to CO (70% resistance change after 30 s contact) and a larger response to H than CO in dry O-N mixts. but enhanced response to CO in the presence of water vapor.

L26 ANSWER 167 OF 272 CA COPYRIGHT 2001 ACS
 AN 103:24036 CA
 TI Probe for measuring the conductivity of a solution
 IN Journet, Gerard
 PA Fives-Cail Babcock S. A., Fr.
 SO Fr. Demande, 8 pp.
 PI FR 2548783 A1 19850111 FR 1983-11385 19830708
 AB The title probe, from which deposits can be removed at intervals and useful in sugar refining, consists of an electrode mounted on a support insulating it from the wall of the vessel contg. the soln. whose cond. is to be detd., the edges of the inlet for the probe conforming to the cylindrical surface of the electrode which can rotate in a chamber through which a solvent can be circulated.

L26 ANSWER 177 OF 272 CA COPYRIGHT 2001 ACS
 AN 100:9113 CA
 TI Moisture-sensitive resistors
 IN Murata, Michihiro; Kitao, Shoichi; Okabe, Shinsei
 PA Murata Mfg. Co., Ltd., Japan
 SO Ger. Offen., 34 pp.
 PI DE 3311047 A1 19831006 DE 1983-3311047 19830325
 US 4442422 A 19840410 US 1983-477408 19830321
 PRAI JP 1982-54569 19820331
 AB The resistor consists of an insulating substrate, a detector electrode pair, and a 2-layer moisture-sensitive coating covering the electrodes. The coating consists of (1) an inner layer of a macromol. resin contg. a poly(vinyl alc.) copolymer and an electrolyte and (2) an outer layer of a macromol. resin. The moisture absorption ability of the 2nd layer is lower than that of the 1st layer. Optionally, the latter contains a cellulose deriv. The elec. resistivity of the detector decreases with increasing moisture concn. in the surrounding gas. The nature of the decrease depends

on the coating and electrolyte compns. Thus, an alumina substrate provided with 2 Au detector electrodes was covered with (1) an inner layer of acrylic-modified poly(vinyl alc.) and Na acetate electrolyte and (2) an outer layer of Et cellulose.

L26 ANSWER 213 OF 272 CA COPYRIGHT 2001 ACS

AN 83:141358 CA

TI Voltammetry of ruthenate. Determination of ruthenium from ruthenate electroreduction

AU Bardin, M. B.; Nguyen Phuoc Thanh

CS V. I. Lenin Kishinev State Univ., Kishinev, USSR

SO Zh. Anal. Khim. (1975), 30(4), 765-9

AB Ru can be detd. quant. from the 1st wave of Ru redn. in a >8N NaOH medium, where the current is fully limited by diffusion. The diffusion current is directly proportional to ruthenate concn. in the range 1×10^{-4} - 10^{-3} M. O dissolved in the electrolyte and 8-fold excess of Pd(II), 4-fold Rh(III), and 6-fold Ir(IV) do not interfere; Pt(IV) and OS(VIII) do. The method of preliminary sepn. of Ru as RuO₄ does not affect the 1st wave parameters. The electrochem. redn. of RuO₄ can be used for the inverse voltammetric detn. of RuO₄ after prior accumulating of the ppt. RuO₂.xH₂O on the electrode surface.

L26 ANSWER 224 OF 272 CA COPYRIGHT 2001 ACS

AN 78:150402 CA

TI Temperature measurement for forming thin films on substrates by vacuum vapor deposition

IN Hacman, Dionys

PA Balzers Hochvakuum G.m.b.H.

SO Ger., 4 pp.

PI DE 1771088 B2 19730222 DE 1967-1771088 19680401

GB 1151482 A 19690507 GB 1968-1151482 19680409

PRAI CH 1967-5424 19670414

AB The temp. (100-400°) of glass substrates in the vacuum vapor deposition of metals is controlled by measuring the elec. resistance of a strip of identical deposit-free glass between 2 electrodes. To avoid polarization, the measuring current is a.c. Both warming and reliable temp. control of the substrate lead to better adherence of the deposited metal.

L26 ANSWER 234 OF 272 CA COPYRIGHT 2001 ACS

AN 72:137771 CA

TI Thin-film metal oxide resistors

PA N. V. Philips' Gloeilampenfabrieken

SO Fr., 7 pp.

PI FR 1576658 19690801

PRAI NL 19670706

AB Metal oxide films having high resistances (1-500 kilohms/square) are fabricated by depositing (e.g. by evapn. in a vacuum) a series of metal films (e.g., Nichrome). Each film in the series is oxidized almost completely before deposition of the following one. Both the deposition and the oxidn. of each layer are monitored by measuring the resistance of similar layers deposited onto a nearby glass substrate which has electrodes and leads already attached. For Nichrome films, the substrate temp. is 350° and deposition of a given layer is halted when the resistance of the control film has decreased to 200 kilohms/square. The air pressure in the bell jar is then increased to 6×10^{-4} torr and oxidn. proceeds until the resistance of the control stops increasing. The pressure is then reduced, and subsequent layers are added. An alternative method, yielding films of greater uniformity and higher resistivity, involves evapg. the nichrome

(1-5) $\times 10^{-5}$ torr. Oxidn. can then occur to some extent while evapn. proceeds, but is completed only by interrupting evapn. periodically to allow oxidn. at higher pressures.

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STN INTERNATIONAL LOGOFF AT 07:12:24 ON 14 JUN 2001

=> d his

(FILE 'HOME' ENTERED AT 10:41:48 ON 14 JUN 2001)

FILE 'CA' ENTERED AT 10:42:13 ON 14 JUN 2001

L1 5959 S (CVD OR(VAPOR? OR GAS?)(2A)DEPOSIT?)(6A)(CONTROL? OR DETECT? OR DETERMIN? OR MONITOR? OR MEASUR? OR SENSE# OR SENSOR OR SENSING OR ESTIMAT?)

L2 314 S L1 AND(CONDUCT? OR RESIST?)(4A)(DETECT? OR DETERMIN? OR MEASUR? OR MONITOR? OR ASSAY? OR TEST? OR QUANTIF? OR ESTIMAT? OR EVALUAT? OR SENSE# OR SENSING OR PROBE# OR PROBING)

L3 28 S L2 AND ELECTRODE

L4 3 S L3 AND(FILAMENT OR NON CONTACT OR PLASMA SENSOR)

L5 306 S L1 AND ELECTRODE NOT L3

L6 13 S L5 AND (SITU OR INSITU)

L7 2 S L6 AND (RF OR PARTICLE)

L8 20 S L2 AND CAPACIT?

L9 39 S L5 AND CAPACIT?

L10 10 S L9 AND THICKNESS

L11 123 S L1 AND SHORT?

L12 8 S L11 AND ELECTRODE

L13 10266 S ELECTRODE(2A)(SUPPORT? OR SUBSTRATE)

L14 79 S L1 AND(CONDUCT? OR RESIST?)(4A)(MONITOR? OR METER OR TEST? OR SENSOR OR PROBE#)

L15 105 S L13 AND(CONDUCT? OR RESIST?)(4A)(MONITOR? OR METER OR TEST? OR SENSOR OR PROBE#)

L16 184 S L14-15

L17 25 S L16 AND(MULTI ELECTRODE OR SITU MONITOR? OR INTERDIG? OR(GLASS OR POLYMER OR POLYPROP? OR POLY PROP?)(3A)(SUPPOT? OR SUBSTRATE))

L18 48 S L4,L7,L10,L12,L17

L19 42 S L18 NOT PY>1999

=> d bib,ab 1-42 119

L19 ANSWER 6 OF 42 CA COPYRIGHT 2001 ACS

AN 130:230294 CA

TI Thickness monitoring device used in thin-film deposition apparatus

IN Kato, Motokatsu; Araki, Kiyoshi

PA Asahi Optical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

PI JP 11071673 A2 19990316 JP 1997-233120 19970828

AB The device has two electrodes, a detector for monitoring capacitance between the electrodes, and a calculator to work out the thickness of deposition films based on the capacitance. The thickness of the deposition films is elec. detd. accurately by the compact device.

L19 ANSWER 13 OF 42 CA COPYRIGHT 2001 ACS

AN 128:162414 CA

TI Volatile organic compound sensors

IN Yamagishi, Frederick G.; Stanford, Thomas B.; Van Ast, Camille I.; Miller, Leroy J.

PA He Holdings, Inc., USA

SO Eur. Pat. Appl., 20 pp.

PI EP 821228 A1 19980128 EP 1997-112810 19970725
US 5756879 A 19980526 US 1996-685997 19960725
PRAI US 1996-685997 A 19960725

AB A sensor for reversibly detecting target volatile material in the gas phase comprises a dielec. substrate having a major surface, a pair of elec. conductive electrodes disposed on said major surface of said substrate, and a conductive polymer covering said pair of elec. conductive electrodes, said conductive polymer doped with appropriate dopants, said dopants present in said conductive polymer in measurable excess of said stoichiometrically required to change said conductive polymer from a neutral state to a charged state to provide requisite cond., said sensor being capable of detecting the presence of said target volatile material at a concn. of ≤ 500 ppm.

L19 ANSWER 15 OF 42 CA COPYRIGHT 2001 ACS

AN 128:109406 CA

TI Particle measurement in vacuum tools by in situ particle monitor

AU Miyashita, Haruzo

CS Vacuum Component Div., ANELVA Corp., Japan

SO Aneruba Giho (1996), 2, 67-71 CODEN: ANGIFG; ISSN: 1342-2979

AB In situ particle monitor is employed to measure particles in various vacuum tools such as a plasma CVD tool, an electron beam evapn. tool, a poly-Si etching tool and a load-lock chamber of a sputtering tool. As a result of these expts., in situ particle monitor is effective in (1) detecting sudden flaking from the walls and the electrodes of a process chamber, (2) detg. the source of particle contamination, (3) optimizing the chamber cleaning cycle, and (4) confirming the particle level after chamber cleaning. Probably in situ particle monitor has advantages, compared with particle per wafer pass (PWP) measurements or the std. method for wafer level particle monitoring. In situ particle monitor enables particle measuring easily which is impossible in PEP measurements. Also the particle counts measured by in situ particle monitor considerably differ from the location where the sensor is installed. This is because that the behavior of particles is closely assocd. with the pressure of environment, particle size, d. and so on. It is, therefore, suggested that the location where the sensor is installed should be to measure actual chamber condition accurately with in situ particle monitor.

L19 ANSWER 31 OF 42 CA COPYRIGHT 2001 ACS

AN 121:13653 CA

TI electronic sensor for alcohol content of fuels.

IN Yamagishi, Frederick G.

PA Hughes Aircraft Co., USA

SO Eur. Pat. Appl., 6 pp.

PI EP 597452 A1 19940518 EP 1993-118170 19931110
US 5337018 A 19940809 US 1992-976074 19921113

PRAI US 1992-976074 19921113

AB An electronic sensor for measuring the alc. concn. of mixts. comprising liq. hydrocarbons and alc. is characterized by at least two elec. conducting electrodes supported on a substrate and by conducting polymer coating shorting at least two electrodes, the conducting polymer having a resistance that changes as a function of the alc. concn.

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